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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,796	03/04/2004	Nobuyuki Okubo	1391.1057	5229
21171 7590 09/05/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER KRASNIC, BERNARD	
			ART UNIT 2624	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/791,796	Applicant(s) OKUBO, NOBUYUKI	
	Examiner Bernard Krasnic	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-04-2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference character "7" in Fig. 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:  
Page 1, line 3: The -- CROSS REFERENCE TO RELATED APPLICATIONS -- section of the specification is required to be placed above the "BACKGROUND OF THE INVENTION" section to inform of any related applications, in this case the Foreign

application JAPAN 2003-065467 03/11/2003.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claim 1, lines 4-5: The limitation "contained in a read two levels of black and white monochrome image of two levels" renders this claim indefinite because this sentence seems grammatically incorrect. It is suggested to be -- contained in two levels, the two levels being black and white -- or something similar.

Re Claim 1, lines 8-9: The limitation "position information about a group bounding rectangle of the continuous black pixel area" renders this claim indefinite because this sentence seems grammatically incorrect. It is suggested to be -- position information of the continuous black pixel area -- or something similar.

Claims 2-4 are dependent upon claim 1.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 5,923,790).

Re Claim 1: Miwa discloses an image reading apparatus for reading an image / direction detection of document which contains character information, the apparatus comprising labeling process unit to group a continuous black pixel area forming characters / different characters are recognized (see Fig. 6A, "l", "k", "e", "b", "a", "n", "s", ".", etc) contained in a read two levels of black and white monochrome image (it is obvious for a typical text document to consist of two levels [black and white]) of two levels, and extracting group bounding rectangle information / a sentence or part of a sentence (see Figs. 9A and 9B, "the extracted group bounding rectangle information is around the text "I like bananas.") about a grouped continuous black pixel area; row extracting process unit to extract row rectangle information from position information about a group bounding rectangle of the continuous black pixel area extracted and grouped by the labeling process unit (see Figs. 9A and 9B, the row rectangle information that is extracted is around the text "I like bananas."); punctuation mark

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identification unit to identify a punctuation mark / period ".", a period, or a comma from a position / end of sentence and a size / half the size of a typical character of the continuous black pixel area grouped by the labeling process unit (see Figs. 9A-9C, col. 9, lines 54-67, col. 10, lines 1-10); and row direction determination unit to determine a direction of a row / direction detection judging from a position relationship among a punctuation mark / period, a period, or a comma in a row rectangle of characters / sentence or part of a sentence contained in an image (see Figs. 9A-9C, col. 9, lines 54-67, col. 10, lines 1-10, col. 11, lines 24-38, col. 12, lines 4-18, col. 2, lines 39-43, the text "I like bananas." is being analyzed and the end of sentence period is detected, the period then is checked to see if it is in the position in the upper part or the lower part in the picked up row line [this is similar to the Applicants method as shown in Figs. 6A and 6B of the Applicants drawings], once the period position is realized, the judgment made by the period processing unit and the direction judging unit is either the direction of the row line is "upward" or "downward" relative to the row line).

Although Miwa does not specifically disclose that the characters are of two levels [black and white], it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such a feature because a typical text document is a black and white document.

Re Claim 4: Miwa further discloses statistical determination process unit to determine a direction of a row by the row direction determination unit for a plurality of rows / every row line of the document, and determining a direction having a higher probability / larger

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count of a direction of a row as a direction of an original in a statistical process (see col. 11, lines 24-38, col. 12, lines 4-18, col. 2, lines 39-43, the direction judging unit receives all the row line direction judgments results and counts the total number of "upward" direction relative to the row line judgments and the total number of "downward" direction relative to the row line judgments, and the document direction judgment is finally decided by realizing which count is larger).

7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa in view of Yuge (US 6,212,299 B1). The teachings of Miwa have been discussed above.

Re Claim 2: However, Miwa fails to disclose binarizing process unit to binarize multi-valued image data when image data of a multi-valued image is read by an image input device.

Yuge discloses binarizing process unit to binarize multi-valued image data when image data of a multi-valued image is read by an image input device (see col. 1, lines 30-41, Yuge shows that a document [a text document is typically a black and white document but depending on the application could be a color document as well] is scanned as a binary [two levels, black and white] document).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miwa's apparatus using Yuge's teachings by including the binarizing process unit in order to quickly and accurately recognize any type [colored or black and white] characters (see Yuge, col. 1, lines 20-21).

As to claim 3, the discussions are addressed with respect to claim 4.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tamaru discloses a digital watermark embedding apparatus for document, digital watermark extraction apparatus for document, and their control method; Ishikawa et al discloses an apparatus and method for determining the directional orientation of a document image based upon the location of detected punctuation marks within the document image; Ishikawa discloses an image reader and image forming device equipped with the same; Yamagata et al discloses character recognition post-processing method; Imaizumi et al discloses image processing device; Al-Karmi et al discloses optical character recognition of handwritten or cursive text in multiple languages; Ota discloses a character segmentation method.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic  
August 28, 2007



JINGDE WU  
SUPERVISORY PATENT EXAMINER